

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (original): A method for enhancing delivery of a compound into and across an animal ocular tissue, the method comprising:

administering to the ocular tissue a conjugate comprising the compound and a delivery-enhancing transporter,

wherein:

- i. the compound is attached to the delivery-enhancing transporter through a linker, and
- ii. the delivery-enhancing transporter comprises fewer than 50 subunits and comprises at least 5 guanidino or amidino moieties, thereby increasing delivery of the conjugate into the ocular tissue compared to delivery of the compound in the absence of the delivery-enhancing transporter.

Claim 2 (original): The method of claim 1, wherein delivery of the conjugate into the ocular tissue is increased at least two-fold compared to delivery of the compound in the absence of the delivery-enhancing transporter.

Claim 3 (original): The method of claim 1, wherein delivery of the conjugate into the ocular tissue is increased at least ten-fold compared to delivery of the compound in the absence of the delivery-enhancing transporter.

Claim 4 (original): The method of claim 1, wherein the ocular tissue is one or more layers of epithelial or endothelial tissue.

Claim 5 (original): The method of claim 1, wherein the ocular tissue is the retina.

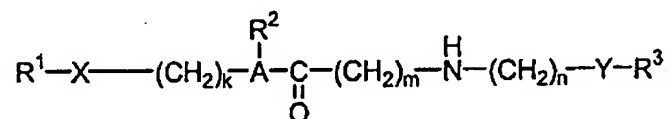
Claim 6 (original): The method of claim 1, wherein the ocular tissue is the optic nerve.

Claim 7 (original): The method of claim 1, wherein the linker is a releasable linker.

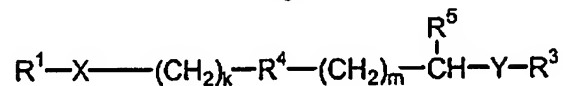
Claim 8 (currently amended): The method of claim 7, wherein the linker is stable in a saline solution [[a]] at pH 7 but is cleaved when transported into a cell.

Claim 9 (original): The method of claim 1, wherein the subunits are amino acids.

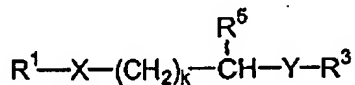
Claim 10 (currently amended): The method of claim 1, wherein the conjugate has a structure selected from the group consisting of structures 3, 4, [[or]] and 5, as follows:



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4



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wherein:

R¹ comprises the compound;

X is a linkage formed between a functional group on the ~~biologically active compound~~ and a terminal functional group on the ~~linking moiety~~ linker;

Y is a linkage formed from a functional group on the transport moiety and a functional group on the ~~linking moiety~~ linker;

A is N or CH;

R² is hydrogen, alkyl, aryl, acyl, or allyl;

R³ comprises the delivery-enhancing transporter;

R⁴ is S, O, NR⁶ or CR⁷R⁸;

R⁵ is H, OH, SH or ~~NHR₆~~ NHR⁶;

R^6 is hydrogen, alkyl, aryl, acyl or allyl;

R^7 and R^8 are independently hydrogen or alkyl;

k and m are each independently selected from 1 and 2; and

n is 1 to 10.

Claim 11 (currently amended): The method of claim 10, wherein X is selected from the group consisting of $-C(O)O-$, $-C(O)NH-$, $-OC(O)NH-$, $-S-S-$, $-C(S)O-$, $-C(S)NH-$, $-NHC(O)NH-$, $-SO_2NH-$, $-SONH-$, phosphate, ~~phosphonate~~ phosphonate, phosphinate, and CR^7R^8 , wherein R^7 and R^8 are each independently selected from the group consisting of H and alkyl.

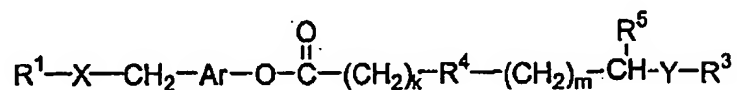
Claim 12 (currently amended): The method of claim 10, wherein the conjugate comprises structure 3, Y is $[[N]] \underline{NH}$, and R^2 is methyl, ethyl, propyl, butyl, allyl, benzyl or phenyl.

Claim 13 (original): The method of claim 10, wherein R^2 is benzyl; k , m , and n are each 1, and X is $-OC(O)-$.

Claim 14 (original): The method of claim 10, wherein the conjugate comprises structure 4; R^4 is S; R^5 is NHR^6 ; and R^6 is hydrogen, methyl, allyl, butyl or phenyl.

Claim 15 (original): The method of claim 10, wherein the conjugate comprises structure 4; R^5 is NHR^6 ; R^6 is hydrogen, methyl, allyl, butyl or phenyl; and k and m are each 1.

Claim 16 (currently amended): The method of claim 1, wherein the conjugate comprises structure 6 as follows:



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wherein:

R^1 comprises the compound;

X is a linkage formed between a functional group on the ~~biologically active~~ compound and a terminal functional group on the ~~linking moiety~~ linker;

Y is a linkage formed from a functional group on the transport moiety and a functional group on the ~~linking moiety~~ linker;

Ar is an aryl group having the attached radicals arranged in an *ortho* or *para* configuration, which aryl group can be substituted or unsubstituted;

R^3 comprises the delivery-enhancing transporter;

R^4 is S, O, NR^6 or CR^7R^8 ;

R^5 is H, OH, SH or NHR_6 ;

R^6 is hydrogen, alkyl, aryl, arylalkyl, acyl or allyl;

R^7 and R^8 are independently selected from hydrogen or alkyl; and

k and m are each independently selected from 1 and 2.

Claim 17 (currently amended): The method of claim 16, wherein X is selected from the group consisting of $-C(O)O-$, $-C(O)NH-$, $-OC(O)NH-$, $-S-S-$, $-C(S)O-$, $-C(S)NH-$, $-NHC(O)NH-$, $-SO_2NH-$, $-SONH-$, phosphate, ~~phosphonate~~ phosphonate, phosphinate, and CR^7R^8 , wherein R^7 and R^8 are each independently selected from the group consisting of H and alkyl.

Claim 18 (currently amended): The method of claim 16, wherein $[[R_4]]$ R^4 is S; R^5 is NHR^6 ; and R^6 is hydrogen, methyl, allyl, butyl or phenyl.

Claim 19 (original): The method of claim 1, wherein the conjugate comprises at least two delivery-enhancing transporters.

Claim 20 (original): The method of claim 1, wherein the conjugate is administered as an eye drop.

Claim 21 (original): The method of claim 1, wherein the conjugate is administered as an injection.

Claim 22 (original): The method of claim 1, wherein the delivery-enhancing transporter comprises a non-peptide backbone.

Claim 23 (original): The method of claim 1, wherein the delivery-enhancing transporter is not attached to an amino acid sequence to which the delivery enhancing transporter molecule is attached in a naturally occurring protein.

Claim 24 (original): The method of claim 1, wherein the delivery-enhancing transporter comprises from 5 to 25 guanidino or amidino moieties.

Claim 25 (original): The method of claim 24, wherein the delivery-enhancing transporter comprises between 7 and 15 guanidino moieties.

Claim 26 (original): The method of claim 24, wherein the delivery-enhancing transporter comprises at least 6 contiguous guanidino and/or amidino moieties.

Claim 27 (original): The method of claim 1, wherein the delivery-enhancing transporter consists essentially of 5 to 50 amino acids, at least 50 percent of which amino acids are arginines or analogs thereof.

Claim 28 (original): The method of claim 27, wherein the delivery-enhancing transporter comprises 5 to 25 arginine residues or analogs thereof.

Claim 29 (original): The method of claim 28, wherein at least one arginine is a D-arginine.

Claim 30 (original): The method of claim 29, wherein all of the arginines are D-arginines.

Claim 31 (original): The method of claim 27, wherein at least 70 percent of the amino acids that comprise the delivery-enhancing transporter are arginines or arginine analogs.

Claim 32 (original): The method of claim 27, wherein the delivery-enhancing transporter is seven contiguous D-arginines.

Claim 33 (currently amended): The method of claim 1, wherein the compound is a therapeutic for a disease selected from the group consisting of bacterial infections, viral infections, fungal infections, glaucoma, anterior, intermediate, and posterior uveitis, optic neuritis, Leber's neuroretinitis, retinitis, ~~pseudotumor/myositis~~, pseudotumor/myositis, orbital myositis, hemangioma/lymphangioma, toxocariasis, ~~Behcet's~~ Behcet's panuveitis, inflammatory ~~chorioretinopathies~~ chorioretinopathies, vasculitis, dry eye syndrome (Sjogren's syndrome), corneal edema, accommodative esotropia, cycloplegia, mydriasis, reverse mydriasis, and macular degeneracy.

Claim 34 (currently amended): The method of claim 1, wherein the compound is selected from the group consisting of anti-bacterial compounds, anti-viral compounds, anti-fungal compounds, anti-protozoan compounds, anti-histamines, compounds that ~~dilate~~ dilate the pupil, ~~anesthetic~~ anesthetic compounds, steroidal antiinflammatory agents, antiinflammatory analgesics, chemotherapeutic agents, hormones, anticataract agents, neovascularization inhibitors, immunosuppressants, protease inhibitors, aldose reductase inhibitors, corticoid steroids, immunosuppressives, cholinergic agents, anticholinesterase agents, ~~muscaric~~ muscarinic antagonists, sympathomimetic agents, α and β adrenergic antagonists, and anti-angiogenic factors.

Claim 35 (original): The method of claim 34, wherein the compound is selected from the group consisting of acyclovir and cyclosporins.

Claim 36 (currently amended): The method of claim 1, wherein the compound is transported ~~aeross~~ across the blood-brain barrier.